

REMARKS

Foreign Priority:

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority under 35 U.S.C. § 119(a)-(d), and for confirming that the certified copy of the priority document has been received at the Patent Office.

Drawings:

Applicant thanks the Examiner for indicating that the drawings filed with the present application have been approved.

Information Disclosure Statement:

Applicant thanks the Examiner for initialing and returning Form PTO/SB/08 A & B filed with the present application, thus indicating that all of the references listed thereon have been considered.

Applicant notes that on November 12, 2003, Applicant submitted an additional Information Disclosure Statement, and Applicant hereby requests the Examiner initial and return the Form PTO/SB/08 A & B, thus indicating that these references have also been considered.

Claim Rejections:

Claims 1-7 are all of the claims pending in the present application, and currently all of the claims stand rejected.

35 U.S.C. § 102(b) Rejection - Claims 3-5:

Claims 3-5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JP 2000-068622 to Yoshitaka. In view of the following comments, Applicant respectfully disagrees.

As shown in the previous section, Applicant has amended claim 3, to indicate that the holding structure of a terminal and a substrate contains “a plurality of soldering portions formed to be bifurcated from a soldering proximal portion of [the] terminal thereby dividing [the] soldering proximal portion into small portions.” *See* claim 3. Applicant submits that this is not disclosed in Yoshitaka. Namely, there is no disclosure of providing bifurcated soldering portions on the terminal. *See* claim 3. In an effort to aid the Examiner in understanding this claim feature, Applicant points the Examiner to the non-limiting, exemplary embodiment of this feature found on page 21 and Figures 13 and 15, of the present application. (*See e.g.* item 26b).

With regard to Yoshitaka, this reference appears to disclose a flat terminal 5 being inserted into a substrate 1, where the terminal 5 has a plurality of projections 6a, 6d, 7a and 7d which lock the terminal 5 to the substrate 1. As shown in Figures 4 and 5, of Yoshitaka, it appears as if the terminal 5 is inserted into a hole 2 and then turned so as to lock the terminal 5 in place. Then the end of the terminal 5 is soldered to the substrate 1. It further appears that each of the projections 6a, 6d, 7a, 7d are soldered to a member 3 which is placed in the hole 2 of the substrate 1.

However, as indicated above, there is no disclosure, teaching or suggestion of the holding structure of a terminal and a substrate contains “a plurality of soldering portions formed to be bifurcated from a soldering proximal portion of [the] terminal thereby dividing [the] soldering proximal portion into small portions.” *See* claim 3.

In view of the foregoing, Applicant submits that Yoshitaka fails to disclose each and every feature of the present invention, as set forth in claim 3. Therefore, Yoshitaka fails to

anticipate the present invention under the provisions of 35 U.S.C. § 102(b). Accordingly, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 102(b) rejection of claim 3. Further, as claims 4-5 depend on this claim, Applicant submits that these claims are also allowable, at least by reason of their dependence.

35 U.S.C. § 103 Rejection - Claims 1-2:

Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable in view of JP 09-186475 to Haruo, in view of U.S. Patent No. 6,315,615 to Raistrick. In view of the following discussion, Applicant respectfully disagrees.

Haruo discloses a terminal 22 having projections 22a, where the terminal 22 is inserted into a hole of a substrate 20 and a land 23, and where the end of the terminal 22 is soldered 24 to the land 23. Additionally, Haruo discloses an upper case 11 placed on top of the substrate 20, where the case 11 has a hole 15 in which the terminal 22 and projections 22a are inserted.

The Examiner admits that Haruo fails to disclose the retaining portion formed in the hole of the connector housing, as set forth in the claims. *See* claim 1. However, the Examiner relies on the teachings of Raistrick to cure these deficiencies. Namely, the Examiner notes that the terminal 56 has retaining portions 74 and 66, as shown in Figure 8. The Examiner asserts that it would have been obvious to incorporate these portions in the Haruo reference.

Applicant respectfully disagrees with the Examiner's above assertions, and submits that it would not have been obvious to combine the teachings of Haruo with Raistrick, or that the combination does not teach or suggest the present invention.

Specifically, Applicant submits that there is no disclosure of using either of the portions 66 or 74, in Raistrick, in a positioning hole. The portion 74 merely rests on medial guide sections 54 or 55, and although the barb 66 cuts into the housing structure, there is no disclosure of the barb 66 being positioned within a positioning hole.

In view of the foregoing, Applicant submits that one of ordinary skill in the art would not have been motivated to combine the above references, as suggested by the Examiner, and even if the references were combined they would fail to disclose each and every feature of the claimed invention. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 1. As such, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of claim 1. Further, as claim 2 depends on claim 1, Applicant submits that this claim is also allowable, at least by reason of its dependence.

35 U.S.C. § 103(a) Rejection - Claims 6-7:

Claims 6-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Haruo reference (see above) in view of JP 10-223284 to Atsuhiko et al.

As with the rejection of claim 1, above, Applicant submits that the Examiner's rejection of claims 6-7 has no merit. As previously indicated, Haruo discloses a terminal 22 having projections 22a, where the terminal 22 is inserted into a hole of a substrate 20 and a land 23, and where the end of the terminal 22 is soldered 24 to the land 23. Additionally, Haruo discloses an upper case 11 placed on top of the substrate 20, where the case 11 has a hole 15 in which the terminal 22 and projections 22a are inserted.

However, as the Examiner admits Haruo fails to disclose, teach or suggest have the terminal bent at an intermediate portion thereof. To cure this deficiency, the Examiner attempts to rely on Atsuhiro. Specifically, the Examiner points to Figure 2 of Atsuhiro and asserts that because the Atsuhiro terminal is bent, it would have been obvious to combine this feature with the terminal in Haruo. Applicant disagrees.

First, Applicant submits that it would not have been obvious to combine the teachings of Haruo with Atsuhiro, as suggested by the Examiner. Namely, as shown in Haruo, the terminal is inserted into substrate, see Figures 4 and 5. If the intermediate portion of the terminal was bent then such an insertion would require a larger hole for the terminal. Stated differently, because the intermediate portion of the terminal would be bent, the hole in the substrate would need to be larger to accommodate the protruding bent portion. It is well known that it is desirable to have a snug fit between the terminal and the substrate, and increasing the size of the hole to accommodate the bent portion, would adversely affect the stability of the terminal within the hole. Thus to prevent having a loose connection between the terminal and the substrate, one of ordinary skill in the art would not have been motivated to bend an intermediate portion of the terminal in Haruo, as shown in Atsuhiro.

Additionally, even if one were to combine the teachings of Haruo with Atsuhiro (which is not Applicant's position), the resultant combination would fail to teach or suggest each and every feature of the claimed invention. Namely, there is no teaching or suggestion that any such "bend" would be made such that the "flat portion of [the] terminal is made capable of freely abutting against a terminal pressing portion provided on [the] heat insulating plate." See claim 6.

Even if it were obvious to make a bend in the Haruo terminal, there is no teaching or suggestion of configuring the terminal such that the flat portion of the terminal abuts against a terminal pressing portion. Therefore, any resultant combination of the above references, fails to teach or suggest each and every feature of the present invention, as required.

In view of the foregoing, Applicant submits that one of ordinary skill in the art would not have been motivated to combine the above references, as suggested by the Examiner, and even if the references were combined they would fail to disclose each and every feature of the claimed invention. Therefore, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 6. As such, Applicant hereby requests the Examiner reconsider and withdraw the above 35 U.S.C. § 103(a) rejection of claim 6. Further, as claim 7 depends on claim 1, Applicant submits that this claim is also allowable, at least by reason of its dependence.

Conclusion:

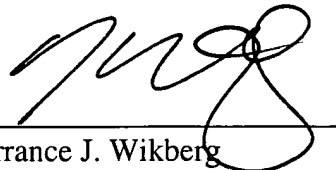
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/091,183

Our Ref.: Q68816
Art Unit: 2839

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Terrance J. Wikberg
Registration No. 47,177

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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